

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-12. **(Cancelled)**

13. **(Currently Amended)** An apparatus for laminating a lithium or lithium alloy sheet into a thin film, said apparatus comprising:

a main frame;

a lithium or lithium alloy sheet feed roller;

a first encoder roller adapted to measure a speed of the lithium or lithium alloy sheet at an entrance of the lamination apparatus;

a first tension roller having a load cell adapted to measure the tension on the lithium or lithium alloy sheet at the entrance of the lamination apparatus;

a lamination lubricant dispensing unit;

a pair of working rollers mounted onto supporting members operatively connected to the main frame via hydraulic actuators, each working roller of the pair of working rollers having end portions and a generally convex curvilinear cylindrical shape including a flat central portion; the meeting surfaces of the flat central portions of the pair of working rollers defining a lamination surface adapted to reduce the thickness of the sheet of lithium or lithium alloy to form a lithium or lithium alloy film of reduced thickness;

at least one actuator operatively connected to each end portion of each working rollers

a measurement system for measuring the evenness of the thickness of the lithium or lithium alloy film of reduced thickness; the actuators being linked to the optical measurement system for adjusting the profile of the lamination surface in response to measurement of the measurement system by applying forces to the end portions of the working rollers such that each said working rollers bends thereby modifying the shape and profile of said lithium or lithium alloy film of reduced thickness being laminated;

a second encoder roller adapted to measure the speed of the lithium or lithium alloy film of reduced thickness at an exit of the lamination apparatus; wherein the thickness of the lithium or lithium alloy film of reduced thickness is determined by a speed differential between the first and second encoder roller;

a second tension roller having a load cell adapted to measure the tension on the lithium or lithium alloy film of reduced thickness at the exit of the lamination apparatus;

and;

a winding roll for winding the lithium or lithium alloy film of reduced thickness, said winding roll connected to a driving means, the driving means responsive to signals from the load cell of the second tension roller for winding the lithium or lithium alloy film of reduced thickness [said film] under a controlled tension.

14. **(Previously Cancelled)**

15. **(Presently Amended)** An apparatus as defined in claim 13 further comprising a pair of back-up rollers operatively mounted to the main frame, each back-up roller adjacent and in contact with one of the pair of working rollers and adapted to apply pressure onto the adjacent working roller.

16. **(Presently Amended)** An apparatus as defined in claim 13 wherein the actuators are hydraulic piston-cylinders adapted to generate a necessary force to bend said working rollers.

17. **(Previously Presented)** An apparatus as defined in claim 13 wherein hydraulic piston-cylinders are mounted onto support frames to which are mounted said back-up rollers.

18. **(Previously Cancelled)**

19. **(Original)** An apparatus as defined in claim 16 wherein adjustment of pressure and forces is provided through hydraulic control valves adapted to regulate hydraulic fluid debit.

20. **(Previously Presented)** An apparatus as defined in claim 13 further comprising a straightener having a series of tightly packed upper rollers and lower rollers adapted to eliminate any lateral displacement of said lithium or lithium alloy sheet thereby ensuring said lithium or lithium alloy sheet is fed straight into said lamination surface without any lateral weaving motion.

21. **(Original)** An apparatus as defined in claim 13 further comprising a thin film of insulating material which is winded around the winding roller to separate layers of lithium or lithium alloy film such that they will not adhere to each other.
22. **(Previously Presented)** An apparatus as defined in claim 13, wherein the actuators are operatively connected to the supporting members of the working rollers.
23. **(Previously Presented)** An apparatus as defined in claim 22, wherein a pair of actuators is operatively connected to each supporting member of the working rollers.